

**Title:** Continuous and Sustainable Workshops and Training in Enhancing Institutional Capacity through Innovative Partnerships between Pacific Minority Serving Institutions (WEICIPPI)

**Institution:** University of Hawaii, Honolulu

**City/State:** Honolulu, HI

**PI:** Dilmurat Azimov

**Project Summary:** These opportunities will enable the University of Hawai'i at Manoa (UHM) and University of Guam (UOG), the two leading Western-accredited MSIs in the Pacific, with NASA prioritized capabilities to become competitive in securing NASA funding resources, grants and contracts. The recently NASA-funded Hawai'i's Engaged STEM Pathways (HESTEMP) Project of UHM in collaboration with UH-Hilo, Kapiolani Community College and several high schools of Oahu and Big Island has initiated and developed several important studies and "key" research projects, including small satellite maneuvers, multi-body problems, orbital debris, atmospheric aerosol studies, planetary landing maneuvers, optimal transfers, investigations in water extraction on a planetary surface, and unmanned aerial systems (UAS) studies. UOG has augmented current research priorities in water resource management, karst aquifer modeling, and coral reef resilience with NASA collaborations in the remote sensing (RS) and geographic information systems, made possible through the recently minted NASA Guam EPSCoR program. Overall, these UHM and UOG studies have laid out a theoretical and foundational framework and created a gateway for under-represented and underserved students to conduct hands-on simulations to address the long-term NASA Strategic Goals and Objectives in Earth sciences and space exploration. Moreover, this has contributed to the initiation of the UHM's new fouryear Aerospace Engineering BSc degree and UOG's establishment of a new four-year Engineering BSc degree program. The proposed project aims to build critically important capabilities on top of these studies and through innovative partnership of the UHM with the UoG. These capabilities are application- driven and mission-related, and they integrate crosscutting skills and advance emerging NASA mission technologies, thereby enhancing the institutional capacity for securing NASA funds and resources, and ensuring the success and sustainability of the partnership. In particular, it is proposed to initiate and develop a "new culture" of the proposal preparation and submission at the UHM and UOG, and by using internal and external "moc review". As educational outreach, the project team intends to reach out to the College of Marshall Islands (CMI) to establish a long-term partnership by initiating the studies on the key projects. These partnerships between the UHM, UOG and CMI pave the way to enriching and extending the STEM education and research capabilities, thereby building the institutional capacity and leveraging the competitiveness of these universities for securing NASA funding resources. For easy reference, the project is titled "Workshops to Enhance Institutional Capacity through Innovative Partnerships between Pacific Institutions" or WEICIPPI.

